REMARKS/ARGUMENTS

Reconsideration and allowance in view of the foregoing amendment and the following remarks are respectfully requested.

Claims 1-5 and 7-18 are now pending.

Original claims 1-9 were rejected under 35 USC 102(b) as being anticipated by Yamaguchi et al. Claim 1 has been amended above to include the limitation previously recited in claim 6, that a distance in the axial direction between the sealing portion and an end of the movable core opposite from the sealing portion is equal to or less than 18 millimeters. Claim 1 has also been amended to include a part of intervening claim 4 for clear antecedent basis.

As noted above, claim 1 has been amended to include the limitation to an axial length between the sealing portion and an end of the movable core being equal to or less than 18 mm. This distance is represented by "L" in the specification. As explained in the specification, when length L is small (i.e., $L \leq 18mm$), the valve member can incline so that the valve member contacts the guiding means at the first end or the second end. Furthermore, the sealing portion rotates with respect to that contact point so that the degree of sealing of the sealing portion decreases. To solve this problem, in accordance with one aspect of the present invention, the fuel injection valve structure is constructed and arranged so that an intersecting point of lines perpendicular to the inner peripheral surface of the valve body providing the valve seat intersect each other at an intersecting point positioned between first and second ends of the guiding means.

Anticipation under Section 102 of the Patent Act requires that a prior art reference disclose every claim element of the claimed invention. See, e.g., Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1574 (Fed. Cir. 1986). While other references may be used to interpret an allegedly anticipating reference, anticipation must be found in a single reference. See, e.g., Studiengesellschaft Kohle,

G.m.b.H. v. Dart Indus., Inc., 726 F.2d 724, 726-27 (Fed. Cir. 1984). The absence of any element of the claim from the cited reference negates anticipation. See, e.g., Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 715 (Fed. Cir. 1984). Anticipation is not shown even if the differences between the claims and the prior art reference are insubstantial and the missing elements could be supplied by the knowledge of one skilled in the art. See, e.g., Structural Rubber Prods., 749 F.2d at 716-17.

In rejecting the limitations of original claim 6, the Examiner summarily concluded that "distances and relative dimensions" as recited in claims 5, 6 and 8 are inherently the same as those shown in Yamaguchi. Applicant respectfully traverses the summary rejection of applicant's claims in this regard.

Yamaguchi is directed to a fuel injection valve so designed that the weight of the nozzle needle is relatively small. This object is achieved in Yamaguchi by providing a nozzle needle having a cavity therein and opening(s) through which the cavity communicates with the fuel accumulation bore. Thus, the invention of Yamaguchi relates in particular to the hollowed nozzle needle. Yamaguchi et al does not disclose a reduced size of the movable valve member nor any problem of inclining of the valve member. Importantly, as well, no dimensions of the fuel injection valve structure are disclosed therein.

Because no dimensions whatsoever are disclosed in Yamaguchi et al it was improper for the Examiner to have rejected original application claim 6 as anticipated by Yamaguchi. For the same reasons, claim 1 (which has been amended above to incorporate the dimensional limitation of claim 6) cannot be properly rejected as anticipated by Yamaguchi. The Examiner has not established that this limitation would have been obvious from Yamaguchi either.

It is further respectfully submitted that, because Yamaguchi's invention relates to the provision of a valve needle having a cavity and openings for fuel flow and because Yamaguchi includes no disclosure whatsoever with regard to an inclination angle of the inner peripheral surface 29a, nor any particular dimensional or positional relation between that surface and an intersection point of normals to that surface, it is improper for the Examiner to summarily conclude, by annotating the Yamaguchi illustrations, that the claimed invention is disclosed in Yamaguchi. In fact, by comparing Yamaguchi's Figure 1 and Yamaguchi's Figures 3, 4 and 5, for example, it can be seen that the depicted inclination of the interior surface 41a and 52b varies dramatically from Figure to Figure, thus underscoring that this merely a schematic representation of the inclined surface and not "teaching" of a positional relation as the Examiner has alleged. In this respect, the drawings of Yamaguchi do not disclose an intersecting point and its position as specifically disclosed and claimed in the present application. The Yamaguchi drawings are merely schematic views directed to an entirely different characteristic of a fuel injection valve (the hollow needle). Thus, the Examiner's selection of a figure of Yamaguchi and attempt to derive the relationship claimed therefrom was necessarily made with improper hindsight knowledge from applicant's disclosure. Just because the Examiner was able to find one of several Figures in Yamaguchi et al, in which in the schematic illustration it just so happens the intersection point is located within the two ends of the guide means, does not mean that the claimed relation is disclosed by Yamaguchi or would be derived therefrom by one skilled in the art. On the contrary there is no mention of the problem addressed by the invention or its solution so as to motivate the skilled artisan to adopt the particular structural configuration claimed. The fact that the Figures of Yamaguchi, if annotated to include the "intersection point", would provide the intersection in widely differing locations underscores that Yamaguchi does not in fact anticipate nor render obvious this feature.

The structure of the present invention is constructed and arranged in particular so that an intersection point is located between the first end and the second end of the

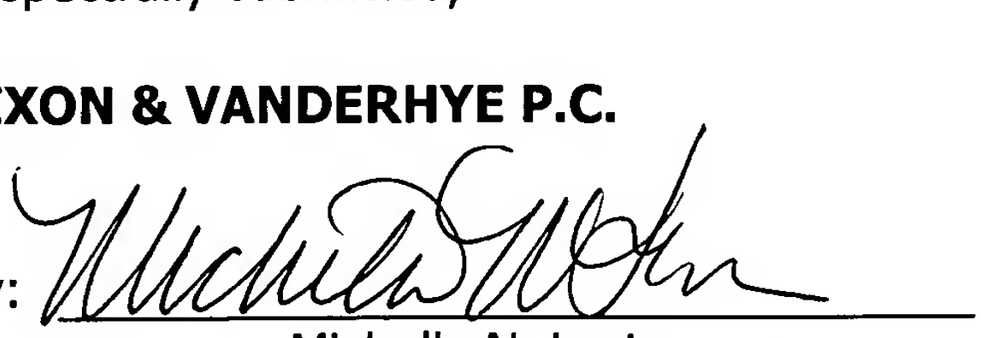
guide means. Consequently, if/when the valve member inclines, a decrease in sealing resultant from contacting the guide means does not occur so that any decrease in sealing is suppressed. Yamaguchi does not teach such a design characteristic.

New independent claim 10 has also been presented for consideration. Claim 10 refers in particular to the distance in the axial direction between the intersecting point and the second end of the guiding means remote (opposite) from the sealing portion as being equal to or less than 1.8 millimeters. This distance is represented by reference "t" in the specification and drawings. In this regard, when "t" is large the valve member will tend to contact either the first or second end of the guide means. By setting "t" $\leq$ 1.8 mm, coupled with the synergic effect of the intersection point being located between the first and second ends of the guiding means, any deterioration in the sealing degree of the sealing portion is suppressed. In addition to lacking other features of the invention claimed, Yamaguchi fails to disclose the value of "t" $\leq$ 1.8 mm.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and an early Notice to that effect is earnestly solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

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